



# The Conservation Strip

CONSERVING NATURAL RESOURCES FOR A BETTER ENVIRONMENT

98 ALEXANDRIA PIKE, SUITE 31 ► WARRENTON, VA 20186

## Landscaping For The Environment

With Spring right around the corner, nurseries and garden centers are starting to stock up with landscape plants. Undoubtedly, many homeowners will be adding to their landscapes in the coming weeks. A properly designed and maintained landscape is not only pleasing to the eye, it can also contribute to a healthier environment, especially in regards to soil, water and air. The following facts and figures were provided by Diane Relf, former Extension Specialist for Environmental Horticulture at Virginia Tech.

**Plants Protect Water Quality:** Proper landscaping reduces nitrate leaching from the soil into our water supplies. Plants also reduce surface water runoff, keeping phosphorus and other pollutants out of our waterways and preventing septic system overload.

**Proper Landscaping Reduces Soil Erosion:** A dense cover of plants and mulch holds soil in place, keeping sediment out of lakes, streams, stormdrains, and roads; and reducing flooding, mudslides, and duststorms.

**Plants Improve Air Quality:** One tree can remove 26 pounds of carbon dioxide from the atmosphere annually, equaling 11,000 miles of car emissions. Landscape plants, including shrubs and turf, remove smoke, dust, and other pollutants from the air. One study showed that 1 acre of trees has the ability to remove 13 tons of particles and gases annually.

**Landscaping Lowers Summer Air Temperatures:** According to the EPA, urban forests reduce urban air temperatures significantly by shading heat sinks (places where heat collects or builds up), such as buildings and concrete, and returning humidity to the air through evaporative cooling. Trees shading homes can reduce attic temperatures as much as 40 degrees.

**Landscaping Conserves Natural Resources:** Properly placed deciduous trees reduce house temperatures in the summer, allowing air conditioning units to run 2 to 4 percent more efficiently. Deciduous trees also allow the sun to warm the house in the winter. Homes sheltered by evergreen windbreaks can reduce winter heat loss and are generally warmer than homes without such protection. By using trees to modify temperatures and protect against wind, the amount of fossil fuels used for cooling and heating is reduced.

While landscaping with the environment in mind is not a new idea, it has really become mainstream in the last decade. Landscape designers and professional nurserymen are willing and eager to provide advice to both new and existing homeowners.

One of the keys to a successful landscape is to select the right plant for the right place. This can be as simple as selecting sun loving plants for sunny areas and shade tolerant plants to grow under existing trees. It can mean not planting a tree that grows 50 feet tall under the power lines, or a shrub that grows 15 feet tall in front of the picture window.

Some plants, like roses or fruit trees, tend to be high maintenance and require frequent applications of water, fertilizers and pesticides to keep them growing. Many people today want low maintenance, and there are plants that fill the bill. Native plants are popular for this reason, and there are many specialty nurseries to help homeowners make the right choices.

The Department of Conservation and Recreation has a website on native plants at <http://www.dcr.state.va.us/dnh/native.htm>. Virginia Cooperative Extension has general factsheets at <http://www.ext.vt.edu/>.

## Teachers Corner

The National Association of Conservation Districts is sponsoring **Soil and Water Stewardship Week** April 24-May 1. The theme for this year is '**Celebrate Conservation**'. Once again, the JMSWCD will offer a poster contest for 4th grade students. Contact the District at 347-3120 for details. The NACD website at <http://www.nacdnet.org/outreach/> has information and links for teachers on a variety of conservation issues.

The District has visited several schools already this year to do programs on soil and water conservation. There is still time to schedule visits for this spring. The **Soils** program is appropriate for third grade and each student makes a soil tube. The **Enviroscape** model is suitable for several grades and can be used to demonstrate erosion, pollution, and conservation practices.

As spring unfolds and the trees leaf out, consider a program on **tree identification** and the importance of trees in conserving soil and water. Each school was visited last summer and we have a good idea of the location and types of trees on each property. Call the District at 347-3120 x 3 to schedule any program.

## Wildlife Seed Available

The John Marshall SWCD will offer partridge pea (*Chamaecrista fasciculata*) for wildlife planting this spring. Partridge pea is a native, annual legume that readily reseeds itself, and provides excellent food and cover for birds. This attractive plant reaches 3 feet in height with bright yellow flowers and pea-like seed-pods.

Seed should be planted in May in either a prepared seed bed, or disturbed soil in full sun. Seed should be spread at the rate of 10-12 seeds per square foot and covered 1/4 inch deep. Seed will be packaged in small quantities that are ideal for odd corners and fence rows.



The partridge peas will be available by May 1 on a first come first serve basis. Call the District at 347-3120 x 3 to reserve a package.

## Holiday Lake Forestry Camp

For over 50 years, **Holiday Lake Forestry Camp** has introduced young Virginians to the challenges, special skills and knowledge needed for managing forest resources which are used and enjoyed every day. The camp is designed for students who want to: explore and experience activities in forestry and wildlife related careers; participate in forestry and wildlife judging teams, Envirothon competitions or ecology clubs; and, have a special interest in *hands on* learning about natural resources. Classes are taught by professional foresters, wildlife biologists and conservation resource specialists. Located within the 20,000 acre Appomattox-Buckingham State Forest, the Camp is held at the Holiday Lake 4-H Education Center from June 20-25. The John Marshall SWCD sponsors **two** students, ages 13-16 to attend this camp each year. The registration deadline is April 22. Call the JMSWCD office at 347-3120, ext. 3, for more details.

## Youth Conservation Camp

Each year the JMSWCD sponsors two students, grades 9-12, to **Youth Conservation Camp** held at Virginia Tech in Blacksburg. Camp is sponsored by the Virginia Association of Soil and Water Conservation Districts. The camp explores a wide variety of natural resources topics including forestry and wildlife, fisheries, watershed management, pollution issues and agricultural best management practices. There are plenty of outdoor, hands-on training activities with highly skilled professional instructors. Field trips this year include a trip to Claytor Lake State Park, a hike to the Cascades waterfall, a visit to the Agricultural Research Farm, a visit to Mountain Lake, and a canoe trip on the New River. The date for the camp is July 10-16 and applications must be into the JMSWCD office by May 1. If you are interested, please call 347-3120, ext. 3, for further information.

# Type I Soil Mapping

## The Ultimate Planning Tool

Anyone who is interested in purchasing property, subdividing land, developing a farm plan, or locating a pond site, should consider requesting a Type I Soil Map from the Department of Community Development. This service can save money and headaches down the road. A brief history of soil mapping in Fauquier gives a good background for this service.

The original Soil Survey for Fauquier County was conducted in 1942-1944 by seven soil scientists working for the United States Department of Agriculture and the Virginia Agricultural Experiment Station. These maps were made by walking over the landscapes, boring auger holes where different soils were anticipated and drawing the soil lines on 1937 aerial photos which were at a scale of 1 inch = 1,320 feet. An experienced soil scientist could map 200 to 300 acres per day. These soil maps were published in 1956 at 1 inch = 1,760 feet. The maps were produced primarily for agricultural use and great emphasis was placed on surface features that affected tillage.

By the late 1980's, all available copies of the 1956 publication had been distributed. At the same time, the County was developing its Geographic Information System (GIS) and a need for updated soil information was prevalent. The first soils layer for the GIS was completed by using the 1956 published soil map (1 inch = 1,760 feet) and refitting the soil maps to the current Tax Map (1 inch = 400 feet). Since these soil maps had not been adjusted to fit the topography of the land (rectified), they had to be stretched to fit the County Tax Map base as well as possible. This first GIS soil layer consisted of soil line boundaries and labels. Many features that were on the original soil maps were not transferred to the GIS, (e.g. rock outcrops, springs, drainageways, cemeteries, schools, churches, etc.)

In a move to further update the GIS soil layer, the County Soil Scientist Office was established in 1989. Evaluations determined that the semi-corrected soil lines on the first layer would need to be adjusted to a rectified topographic base. (This made the adjusted soil lines more accurate in that the ridgetop soils were positioned on the ridges and drainageway soils fit the proper landscape position.)

Now that the updated soil survey maps are complete, they are the best available soils information for individual parcels. Copies of the updated soils maps, which overlay the County Tax Map, are available through the Fauquier County GIS Office or on-line at [www.fauquiercounty.gov](http://www.fauquiercounty.gov).

Along with the County Soil Interpretive Guide, a landowner or potential buyer can obtain information on what soil types exist on parcels and discover any limitations there may be for a proposed use.

The updated soil survey report is designed for many different users. Farmers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and homeowners can use the survey to plan land use, select sites for construction, and identify special practices needed to insure proper waste disposal. Conservationists can use the survey to help them understand, protect, and enhance the environment.

This soil survey information is for planning purposes only. It is intended to alert the reader to the broad range of conditions, problems, and the soil potential for each map unit. Before any land use decisions occur, urban or agricultural, it is highly recommended that the updated soil map be consulted. Realizing the limitations of this soil map, the County Soil Scientist Office is providing a service, for a reasonable fee, that will offer much more detailed soils and cultural information to the land use decision maker. This service entails using the updated soil map as a base in conjunction with the latest aerial and topographic data to field map the different soil types and cultural features at 1 inch = 400 feet.

The Type I Soil Mapping service will provide the greatest benefit if obtained before any type of urban or agricultural practices are planned. This would include subdivision of land (including administrative lots), industrial or commercial uses, and farm plans for special agricultural uses.

It is **NOT** intended for use in determining specific use or suitability of soils for a particular site. Soil Surveys do not take the place of an on-site engineering study, a lot-by-lot evaluation for septic tank drainfield areas or other on-site special use needs. It is, however, to be considered as an over all land-use planning tool. The County Soil Survey will continually be updated as Type I Soil Maps are completed for specific parcels.

To place an order or enquire about Type I Soil Maps, contact the Fauquier County Soil Scientist Office located at 24 Pelham Street, Warrenton, 20186. The phone number is 540-347-6910.

## THE NEXT STEP IN THE TMDL PROCESS

Carter's, Deep, Great, and Thumb Runs slated for implementation

Over the last couple of years the Virginia Department of Environmental Quality has been working on several TMDLs in Fauquier County. TMDL is the acronym for Total Maximum Daily Loads, which is the maximum amount of a pollutant that a water body can carry without compromising its designated use. Designated uses include aquatic life, swimming, fishing, shellfish, and drinking water. These are developed by the State and are intended to reflect the public's interests.

The TMDL process first begins with the recognition of a water quality problem. Water borne bacteria are to blame for almost all of the TMDLs in Fauquier\*. Once persistent excess bacteria are observed by the VADEQ staff and the problem persists, then the stream is placed on the impaired waters list and the TMDL process begins. With the problem recognized, VADEQ then has to undertake the investigative part of the TMDL which is finding out what is causing the problem to begin with.

Of the nine impaired stream segments listed in Fauquier County, seven have gone through this investigative process. Two are yet to be investigated, and three of the seven investigated are now beginning the next step, which is implementation. This is new ground for Fauquier County and the results will largely depend on the level of community involvement. The reason being is that stakeholder involvement plays a crucial role in determining how the State goes about addressing the issues at hand. With public input, hurdles that would otherwise be unforeseen can be expressed, addressed, and overcome.

As the State recognizes the necessity for public input, it is holding the first of several public meeting on **April 12, 2005, at 7:00pm in the Warrenton Community Center, located at 430 East Shirley Avenue in Warrenton**. If you are a farmer, landowner, horse enthusiast, wildlife conservationist or just a concerned citizen living in one of these watersheds your attendance would be very much appreciated.

\*Although bacteria are the leading issue from the TMDL regulatory perspective it should be noted that sediment and nutrient pollution pose a far greater threat to the ecological function of the Commonwealth's stream network.

## Tree Seedling Reminder

The JMSWCD is **not** conducting a tree seedling sale this year. However, the office is still receiving numerous phone calls from folks interested in purchasing seedlings. The good news is that its not too late to order directly from the Virginia Department of Forestry. Since they dig and store seedling in a state-of-the-art refrigerated facility, they will take orders until mid-April and ship through the end of the month. The Augusta Forestry Center can be reached by phone at 540-363-7000, or trees can be ordered online at <http://www.dof.virginia.gov/index.html>.



## Income Alternatives for Woodlot Owners

Virginia Cooperative Extension and Virginia State University will host a conference at Graves Mountain Lodge on April 15-16 to explore income alternatives from woodlots.

There are over 12 million acres of privately owned woodlands in Virginia. The single greatest source of income for these forest landowners is the sale of timber. However, there are many ways to generate income besides the sale of trees for lumber. This conference provides both classroom and field instruction concerning a number of enterprises that landowners can establish in the 'back forty'.

Woodland herbs, mushrooms, specialty wood and craft products, and wildlife options are just some of the topics to be presented.

Conference fees are \$60 for adults and \$35 for youth. There is a lodging fee of \$40 for those choosing to spend the night. Contact Andy Hankins at 804-524-5962, or Carl Stafford at 540-727-3435 for more information and registration forms.



## Debbie Switzer Promoted

## Upcoming Events



Debbie Switzer has worked for the John Marshall SWCD for the past year as an inspector and plan reviewer. Please join us in congratulating her on being promoted to Erosion and Sediment Control Program Manager.

**April - October** - Got a gardening question, need to identify a bug or weed? **Call the Master Gardener Horticulture Hotline** - 347-7950 x 19

**April 12 - TMDL Implementation Plan Meeting** for Carter, Deep, Great, & Thumb Runs. Warrenton Community Center, 7pm. Details on page 4.

**April 15-16 - Income Alternatives for Woodlot Owners Conference.** Graves Mountain Lodge. Details on page 4.

**April 23 - Earthday on the Greenway** - Sponsored by Fauquier Parks and Recreation and the Girls and Boys Club. 11am-2pm, meet at the Caboose on South 4th Street in Old Town. Free

**May 21 - Piedmont Small Farm Festival,** Archwood Green Barns, The Plains. 10am-5pm, featuring local produce, entertainment, and educational exhibits.

*The Conservation Strip* is a quarterly publication of the **JOHN MARSHALL SOIL AND WATER CONSERVATION DISTRICT**, 98 Alexandria Pike, Suite 31, Warrenton, VA 20186

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[www.fauquiercounty.gov/government/departments/jmswcd](http://www.fauquiercounty.gov/government/departments/jmswcd)

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### JMSWCD Employees

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Nancy Miller, Office Associate

### Honorary Directors

Henry Green  
Edwin F. Gulick

### Newsletter Editor

Chuck Hoysa

### Phone

(540) 347-3120, ext. 3

### Email:

[johnmarshall.swcd@vaswcd.org](mailto:johnmarshall.swcd@vaswcd.org)

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# Erosion and Sediment Control Practices in Place



This home site shows a good construction entrance consisting of large stone (#3 stone in this case) to keep construction vehicles from tracking onto public roadways. The silt fence in front extends around the house site on the lower side to contain sediment on site.



The water is running clear. This picture shows a super silt fence in place along Mill Run plus seeding and mulching to protect the waterway from erosion and sediment. Home construction can be seen in the background.

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